Howden Junior School
Headteacher: Mr L Hill
Deputy Headteacher: Miss C Amor

DT - Curriculum Progression

Units are studied across each key stage. There are 5 set units across the two years - food, textiles, structures, mechanical systems and electrical systems. Year 3 do an additional unit on the digital world and Year 5 do an additional unit on mechanical systems.

Unit	Year 3	Year 4	Year 5	Year 6
Food	<u>Eating Seasonally</u> Create a healthy and nutritious recipe for a savoury tart using seasonal ingredients. Consider the taste, texture, smell and appearance of the dish when creating a recipe. Know how to prepare themselves and a work space to cook safely in. Follow the instructions within a recipe. Describing the benefits of seasonal fruits and vegetables and the impact on the environment. Establish and use design criteria to help test and review dishes and suggest points for improvement.		<u>Healthy Bolognese</u> Adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients. Design appealing packaging to reflect a recipe. Cut and prepare vegetables safely. Use equipment safely, including knives, hot pans and hobs. Know how to avoid cross contamination. Follow a step by step method carefully to make a recipe. Evaluate the finished product based on taste, smell, appearance and nutritional	

			value.	
Electrical systems		<u>Torches</u> Design a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. Make a torch with a working electrical circuit and switch. Use appropriate equipment to cut and attach materials. Test and evaluate the success of a final product.		<u>Steady Hand Game</u> Design a steady hand game - identifying and naming the components required. Generating ideas through sketching and discussion. Make electromagnetic motors and tweak the motor to improve its function. Construct a stable base for an electromagnetic game. Accurately cut, fold and assemble a net. Incorporate a circuit into a base. Test own and others finished games, identifying what went well and making suggestions for improvement.
Mechanical systems		<u>Slingshot Car</u> Design a shape that reduces air resistance. Draw a net to create a structure from. Personalise a design. Measure, mark, cut and assemble with increasing	<u>Pop up Book</u> Design a popup book which uses a mixture of structures and mechanisms. Storyboard ideas for a book. Follow a design brief to make a pop up book, neatly and with focus on accuracy.	<u>Automata Toys</u> After experimenting with a range of cams, create a design for an automata toy based on a choice of cam to create a desired movement. Measure, mark and check the accuracy of the jelutong and dowel pieces required.

		accuracy. Make a model based on a chosen design. Evaluate the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.	Make mechanisms and/ or structures using sliders, pivots and folds to produce movement. Use layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. Evaluate the work of others and receive feedback on own work suggesting points for improvement.	Measure, mark and cut components accurately using a ruler and scissors. Assemble components accurately to make a stable frame. Evaluate the work of others and receive feedback on own work.
Structures		<u>Pavilions</u> Design a stable pavilion structure that is aesthetically pleasing and select materials to create a desired effect. Build frame structures designed to support weight. Make a variety of free standing frame structures of different shapes and sizes. Select appropriate materials to build a strong structure and for the cladding. Reinforce corners to strengthen a structure. Evaluate structures made by the class describing what characteristics of a design and construction made it the most effective.		<u>Playgrounds</u> Design a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs. Build a range of play apparatus structures drawing upon new and prior knowledge of structures. Measure, mark and cut wood to create a range of structures. Use a range of materials to reinforce and add decoration to structures Improving a design plan based on peer evaluation. Test and adapt a design to improve it as it is developed

				identifying what makes a successful structure.
Textiles	<u>Cushions</u> Design and make a template from an existing cushion and apply individual design criteria. Follow design criteria to create a cushion. Select and cut fabrics with ease using fabric scissors. Sew cross stitch to join fabric. Decorate fabric using appliqué. Complete design ideas with stuffing and sewing the edges. Evaluate an end product and think of ways for further improvements.		<u>Stuffed Toys</u> Design a stuffed toy considering the main component shapes required and creating an appropriate template. Consider proportions of individual components. Create a 3D stuffed toy from a 2D design. Measure, mark and cut fabric accurately and independently. Create strong and secure blanket stitches when joining fabric. Use applique to attach pieces of fabric decoration. Test and evaluate an end product and give points for further improvements.	